

# FRAMEWORK FOR ZERO LEPROSY IN THE MALDIVES

"100 Leprosy Free Islands by 2023"



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Health  
Protection  
Agency



Ministry of Health



World Health  
Organization  
Maldives



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Leprosy

Current status

Zero-leprosy

'Leprosy-free Maldives'

Strengths

Key challenges to be addressed

# Leprosy

Leprosy is a chronic infectious disease caused by *Mycobacterium Leprae* (*M. Leprae*) affecting skin and peripheral nerves. Leprosy was known more as a scourge to humanity because of the ugly deformities it caused. Several myths and misconceptions perpetuated discrimination against it in the community. People affected were hesitant to seek treatment for the fear of getting discriminated by the family, friends and community. Leprosy remained an incurable disease till multi-drug therapy (MDT) was introduced by WHO in nineteen eighties (WHO Study Group on Chemotherapy 1982 ). Since then national governments, donors, and civil societies including associations of persons affected by leprosy worked in tandem to reduce prevalence in leprosy. Noting the significant progress made in reaching MDT to the needy, 44th World Health Assembly in 1991(WHA Resolution 1991 ) set 'elimination of leprosy as a public health problem, which equals to decreasing the registered prevalence of leprosy to less than one case per 10 000 population. Most countries achieved this goal.

## Current status

MDT contributed to reduction of prevalence but did not make a significant impact on the trends of new case detection. 211 069 new leprosy cases were reported by 158 countries in 2017(Global leprosy update published in WHO Weekly Epidemiological Record ). Leprosy is not uniformly distributed globally; 96% of global new cases were from 22 global priority countries. 34 countries reported zero and 38 countries reported 1-9 new cases in 2017. Such diverse endemicity is more conspicuous in South-East Asia Region(SEAR). India Indonesia accounted for 92% of new case load in the Region. Bhutan, Democratic People's Republic of Korea and Maldives on the other end of the spectrum reported less than 20 cases.

For over five years Maldives has been reporting less than ten cases and in 2018 seven new cases were found with leprosy. Health Protection Agency (HPA) has an impressive track record in implementing leprosy elimination programme. The country was one of high endemic countries in 1982. MDT was introduced in 1982 and whole country was covered in the same year; within a span of 15 years, registered prevalence of leprosy was decreased to less than one cases per 10 000 population (from 96.6 in 1982). After achieving elimination of leprosy as a public health problem, the status is sustained, and the disease burden is further reduced in the next two decades. MDT is made available in all island health centres and staff at health centres, Atoll and Regional level hospitals were trained in leprosy.

# Zero-leprosy

The Leprosy-Free status is defined as zero cases among indigenous population. This is considered for an area if no new cases of leprosy were found continuously for a period of ten years, which equals to twice the number of average incubation period of five years. Presence of an effective surveillance system sensitive enough to detect even one case is another criteria for considering an area to be leprosy-free. At the sub-national level once a geographical area has not reported a case of leprosy for ten or more years, an internal evaluation can be carried out to confirm zero-leprosy status and establish strong surveillance systems.

Many developed countries in Europe once endemic to leprosy have not reported cases for more than 100 years and the socio-economic development of the countries is considered as a factor. Maldives socio-economic condition has also improved

## 'Leprosy-free Maldives'

Maldives achieved all the three targets set by Global Leprosy Strategy 2016-2020; accelerating towards a leprosy-free world . Out of 189 inhabited islands, 157 (83%) of islands have not reported a single case of leprosy for over ten years. 32 islands have been reporting cases sporadically and in 2018 only eight cases were reported. As a logical futuristic step HPA proposed development of a plan for "leprosy-free Maldives". A strategy will be developed by HPA with technical support from partners with the following four key pillars:

- Strengthening ownership by HPA and coordinating with state and non-state actors
- Developing effective surveillance of leprosy in all islands
- Preventing leprosy using single dose rifampicin prophylaxis
- Screening population at risk for active signs of leprosy

WHO staff and experts from partner organizations, deliberated with HPA, dermatologists and developed a draft Zero Leprosy Road map with well-defined milestones. Illustration showing the progress from now to 2030 is enclosed as Annex 1

As the first step on this journey 'Leprosy-free islands initiative' will be initiated which would conclude covering 157 islands which have not registered a single case of leprosy by 2023. More than 100 islands would be confirmed leprosy-free.

# Strengths

Historically Maldives registered great successes like elimination of Measles, Malaria and Filaria. It is prudent to note that the gains achieved are sustained in spite of frequent movement of the people from the neighbouring endemic countries. The country has adequate wherewithal to make Maldives leprosy-free; from island health staff are well versed with leprosy control strategies, diligent referral system to records all patients in a patient-based software for follow-up and rehabilitation. Maldives society of dermatologists are committed to ensure that leprosy no more exists in the country. Persons affected by leprosy expressed interest to participate in the programme.

## Key challenges to be addressed

Still some un-knowns exist about the disease. *M. Leprae* cannot be grown outside the human body. Exact mode of transmission and is not clear and there is no objective test for infection or disease or cure for leprosy. Preventive vaccines for leprosy are still in very initial stages and could take many years before a vaccine is available for use in communities. Zero leprosy initiatives with existing knowledge about the disease needs to be taken forward to accelerate the global leprosy strategy.

Dispersed geography of an island nation and to sustain interest in reaching all people in all islands needs to be ensured. Migrants are an important part of Maldives society and several of the migrants come from leprosy endemic countries and even from high endemic pockets. To effectively contain transmission of infection from an affected person to healthy indigenous person of Maldives stringent health screening measures need to be undertaken. Individuals in all islands need to be educated about prevention of leprosy and use of SDR chemoprophylaxis. A strong buy-in is needed from Government to implement this mission to make Maldives Leprosy-free.

2019

Surveillance for all including migrants  
SOPs for leprosy MDT availability  
Referral and feedback Laboratory tests  
Screening of Contacts  
Chemoprophylaxis  
Community

Detection of all new cases in all districts  
Categorization of islands (cases)

- Zero child cases
- Zero Adult cases (indigenous population)  
SoPs in place

2022

Coverage of Indigenous Population;  
Periodical medical examination of migrants  
Contact Surveillance  
Chemoprophylaxis  
Capacity Building  
Referral system  
Verification at island level – National experts  
Effective Monitoring system

Zero leprosy among indigenous population  
Chemoprophylaxis

Zero new cases In indigenous cases  
100% coverage of Chemoprophylaxi

2025

Screening all islands for leprosy  
Screening of contacts of Islands with cases  
Chemoprophylaxis for all contacts  
Continue MDT services  
Disability care services  
Community engagement  
Effective

New cases from screening campaigns,  
Skin camps; 100%  
Chemoprophylaxis

Zero indigenous cases  
All migrants screened and treated for leprosy

2027

Coverage of all Population  
Contact Surveillance  
Chemoprophylaxis  
Capacity building  
Mid-Term Review  
Preparation of Dossier for the country  
Community engagement  
Effective monitoring system

No New cases detected  
No discrimination observed and reported  
Disability care for all PWD

Zero Leprosy Cases among indigenous population  
All migrants screened and treated for leprosy

2030

Coverage of all Population  
Contact Surveillance  
Chemoprophylaxis  
Capacity building  
Mid-Term Review  
Preparation of Dossier for the country  
Community engagement

Zero Disability  
No Discrimination  
Child cases - 0 cases

Zero Leprosy Cases among indigenous population  
All migrants screened and treated for leprosy

P R O S S E S S

O U T C O M E S

T A R G E T

Activity	2019	2022	2025	2027	2030
Advocacy	Political commitment - Ministerial level instruction	Recognition to those Islands with no new case	More islands with no cases recognized	More islands with no cases recognized	All islands with no cases recognized
	Task force for Zero Leprosy Mission	169 islands to be reviewed	Expanding coverage to 37 islands	All islands included for Zero Leprosy	Review of all islands for zero leprosy
	Notifiable disease	Medical examination at entry and annually			
	Availability of Resources				
Programme management	Additional staff at central level for project	Documentation in 169 Islands	expanding coverage to more Islands Documentation	expanding coverage to more Islands Documentation	Documentation for whole country
	Monitoring at Atoll/ Island levels in 169 islands	Expanding coverage to all Atolls/Islands			
Surveillance	Screening of total population including migrants				
	Screening of special groups 169 islands annually	Screening of special groups 37 islands annually	Screening of special groups 37 islands annually	Screening of special groups 37 islands annually	Screening of special groups 37 islands annually
	Integrated skin camps for skin diseases including leprosy	Integrated skin camps for skin diseases including leprosy	Integrated skin camps for skin diseases including leprosy	Integrated skin camps for skin diseases including leprosy	Integrated skin camps for skin diseases including leprosy
	Sustain passive case finding at Island health centres	Sustain passive case finding at Island health centres	Sustain passive case finding at Island health centres	Sustain passive case finding at Island health centres	Sustain passive case finding at Island health centres

Patient Services	Confirmation of cases at Central level	Confirmation of cases at Central level	Confirmation of cases at Central level	Confirmation of cases at Central level	Confirmation of cases at Central level
	Treatment and follow up of MDT at islands (32)	Treatment and follow up of MDT at islands	Treatment and follow up of MDT at islands	Treatment and follow up of MDT at islands	Treatment and follow up of MDT at islands
	Referral system established Island - Atoll- Central hospital	Referral system managed by zero Leprosy project			
	laboratory tests at Atoll levels Polymerase Chain Reaction (PCR) at Central hospital level	laboratory tests at Atoll levels PCR at Central hospital level	laboratory tests at Atoll levels PCR at Central hospital level	laboratory tests at Atoll levels PCR at Central hospital level	laboratory tests at Atoll levels PCR at Central hospital level
	Family Health Officer/Community health officer assigned role to follow-up and document	Family Health Officer/Community health officer assigned role to follow-up and document	Family Health Officer/Community health officer assigned role to follow-up and document	Family Health Officer/Community health officer assigned role to follow-up and document	Family Health Officer/Community health officer assigned role to follow-up and document
Prevention of leprosy	Contact surveillance 100% annually for 3 years in 169 districts and 5 years in 37 districts	Contact surveillance 100% for 5 years in islands with cases	Contact surveillance 100% for 5 years in islands with cases	Contact surveillance 100% for 5 years in islands with cases	Contact surveillance 100% for 5 years in islands with cases
	Chemoprophylaxis for all population where cases are registered in last ten years	Chemoprophylaxis for all population where cases are registered in last ten years	Chemoprophylaxis for all population where cases are registered in last ten years	Chemoprophylaxis for all population where cases are registered in last ten years	Chemoprophylaxis for all population where cases are registered in last ten years

Monitoring	Leprosy situation at Island level by Health centre managers, community health officers and Family health officers	Leprosy situation at Island level by Health centre managers, community health officers and Family health officers	Leprosy situation at Island level by Health centre managers, community health officers and Family health officers	Leprosy situation at Island level by Health centre managers, community health officers and Family health officers	Leprosy situation at Island level by Health centre managers, community health officers and Family health officers
	Mapping of Islands showing islands with no cases	Mapping of Islands showing islands with no cases	Mapping of Islands showing islands with no cases	Mapping of Islands showing islands with no cases	Mapping of Islands showing islands with no cases
	Annual review of 162 islands by Zero Leprosy project	In-depth review of 162 Islands Annual review of 37 islands	Annual review of islands with cases detected in 2015	Annual review of islands with cases detected in 2017	Annual review of islands with cases reported in 2020
Documentation	Preparation of Islands with no cases for more than 10 years (162) since 2008	Preparation of Dossier for Islands with no cases since 2012	Preparation of Dossier for Islands with no cases since 2015	Preparation of Dossier for Islands with no cases since 2017	Preparation of Dossier for Islands with no cases since 2020
Verification of islands	162 islands with no cases since 2009 (to be carried out in 2020)(National review mission) with experts from other countries	Islands with no cases since 2015	Islands with no cases since 2015	Islands with no cases since 2017	Islands with no cases since 2020

<sup>i</sup>Chemotherapy of leprosy for control programmes. Report of a WHO Study Group. Geneva, World Health Organization, 1982 (WHO Technical Report Series, No. 675).

<sup>ii</sup>WHA44.9 Resolution on Leprosy;  
[https://www.who.int/neglected\\_diseases/mediacentre/WHA\\_44.9\\_Eng.pdf?ua=1](https://www.who.int/neglected_diseases/mediacentre/WHA_44.9_Eng.pdf?ua=1)

<sup>iii</sup>Global Leprosy Update, 2017: reducing disease burden due to leprosy;  
<https://apps.who.int/iris/bitstream/handle/10665/274290/WER9335-445-456.pdf?sequence=1&isAllowed=y>

<sup>iv</sup>Global Leprosy Strategy 2016-2020; accelerating towards a leprosy-free world;  
[https://apps.who.int/iris/bitstream/handle/10665/208824/9789290225096\\_en.pdf?sequence=14&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/208824/9789290225096_en.pdf?sequence=14&isAllowed=y)

<sup>v</sup>WHO Guidelines for the diagnosis, treatment and prevention of leprosy  
<https://apps.who.int/iris/bitstream/handle/10665/274127/9789290226383-eng.pdf?sequence=10&isAllowed=y>

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